

WORLD-WIDE

# AIR TRANSPORTATION

THE WORLD'S FIRST AND ONLY AIR CARGO MAGAZINE



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IN THIS ISSUE

APRIL, 1950

Cooperation—The Key to Better Chartering  
United States Overseas Air Cargo Services  
Guest Air Cargo Editorial No. 30

- Of King Cotton is Talking to the Air
- Planning the Air Freight Terminal
- Skyborne Broccoli

# RAW SUGAR CARGOES

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PAGE 4—AIR TRANSPORTATION—Air Commerce

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# AIR TRANSPORTATION

The world's first and only  
air cargo magazine

Established October, 1942

AIR TRANSPORTATION, published once each month, is devoted (1) to the furtherance of air cargo as the newest and most significant form of freight transportation, (2) the promotion of domestic and international air commerce as an integral factor in progress, prosperity and peace; and (3) the establishment of a safe and sound national as well as international air transportation system. Subscription rate for United States and Possessions, \$5.00 for one year, \$8.00 for two years, and \$11.00 for three years; foreign countries, \$6.00 for one year, \$10.00 for two years, and \$14.00 for three years.

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## CONTENTS

### FEATURE ARTICLES

Guest Air Cargo Editorial No. 30	7
By George F. Cussen	
Cooperation—The Key to Better Chartering	8
By J. L. Logan	
Planning the Air Freight Terminal (Part II)	10
By L. R. Hackney	
United States Overseas Air Cargo Services (Part I)	18
By N. W. Kendall	

### PICTURE STORIES

Skyborne Broccoli	6
Ol' King Cotton is Taking to the Air	9

### DEPARTMENTS

Air Cargo Profiles (L. R. Hackney)	11
By Bud Bier	
Air Commerce	12
Books	22
Air Transportation Congratulates	26
Air Freight Forwarders	26
Air Shipping (International Cargo Rates)	27

### NEWS

Northwest Airlines	12	United Air Lines	14, 15
Flying Tiger Line	12	American Airlines	14
Braniff International Airways	12	Trans-Canada Air Lines	14
Chicago & Southern Air Lines	12	British Overseas Airways Corp.	14
New England Greyhound Lines	12	Beech Aircraft Corp.	14
Sabena Belgian Airlines	12	Dajama Eastern Corp.	14
Air France	12	KLM Royal Dutch Airlines	14
TACA Airways	12	Air Transport Association	15
Linea Aeropostal Venezolana	13	The Bubb Company	15
Swissair	13	Panair do Brasil	15
Slick Airways	13	Air Freight Test Book	15
Air Express Division	13	Brussels International Fair	15
Berlin Airlift	13	Air Associates	15
Pan American World Airways	13	International Civil Aviation	15
Panagra	13	International Air Transport Assn.	15
Glenn L. Martin Company	14	Gordon D. Brown & Associates	15
National Airlines	14, 15	Seaboard & Western Airlines	25
Trans World Airline	14	Lockheed Aircraft Service	25

### COVER

The month of April brings Easter, and Easter brings whole cargoes of freshly-cut Bermuda lilies flown into the United States by Colonial Airlines. Miss Cathy Carlton, neck-deep in lilies, may be doing the unorthodox in sliding down the freight ramp—but it just goes to show to what lengths ladylike will go for a bouquet of airborne flowers.

They never used to think of broccoli as an air-freight revenue producer; but, as Richard W. Gilbert, Eastern Air Lines' cargo sales manager, pointed out recently, "air cargo, like gold, is where you find it." Picked in Alabama, the perishable crop is packaged attractively in cellophane, and flown out of Mobile to Northeast and Midwest markets. Eastern's cargoplanes depart from Mobile at night, several hours after picking, and make delivery the following morning. The airplane is getting most out of its three-month season of

## SKYBORNE BROCCOLI



1. Broccoli field in Southern Alabama



2. Cleaning and packaging at Mike Kaiser & Sons plant



3. Ventilated crates containing pre-cooled broccoli



4. At Mobile airport for shipment to New York and Chicago



## Guest Air Cargo Editorial No. 30

By GEORGE T. CUSSEN

Executive Vice President

THE FLYING TIGER LINE

**T**HE future of the air-freight industry is very easy to analyze.

It can be stated in one simple sentence.

The future depends wholly on volume of traffic at a profit.

The route to that goal is equally plain.

Volume will be attained only with the lowest rates compatible with profitable operations.

We can have in the air-freight industry either a high-rate business rendering specialized service to a few customers, with a few, if any, carriers making money. Or we can have an industry serving a vast number of customers at the lowest practical rates, and many carriers making profits.

This fact is so plain that it is difficult to see how it can be overlooked, and yet we find a tendency to increase rates because of increased costs. This is only natural, but I do not believe we are going to build this industry by increasing rates. The problem of dealing with increased costs, particularly in materials and labor is, admittedly, a very difficult one. But management must meet that problem through a high degree of cost-control and the wisest expenditure of revenues.

I realize these are broad and general statements, easy to make and difficult to apply in a business which costs as much to run as an airline. But this industry cannot be built by surrendering to the pressure of costs and resorting to increases in rates.

I do not mean to say, of course, that increases, *per se*, must not occur. There are some logical increases which the users of air freight must expect to pay. When a carrier renders special service to an industry, that industry should expect to pay for it. If the service is worth the increased cost, we will have no trouble getting an increased rate. If it isn't, the service will be discontinued, and, in fact, it must be for the air-freight profit margin is so small that it cannot afford the luxury of special services which do not pay their way.

When we go back to the prewar days of air transportation, we can readily see that air passenger transportation went through much of the evolutionary process that must be followed by air freight.

In those days, the price a passenger paid to ride across the country by airplane was much higher than it is today. Few carriers were making any money and traffic was

light. Today, the price is much less, more carriers are making money, and a lot more people fly.

Air freight is no different, except that air freight needs volume much more than passenger traffic. The reason is that the profit margin on air freight is much less. A ton-mile of air freight brings in about one-third a ton-mile of passenger traffic.

True, air freight costs are much less.

However, the difference between the cost of air freight and the cost of fast surface transportation to the shipper is much more competitive, in most instances, than the same comparison in respect to passenger transportation.

A man will spend, on himself, the difference between the cost of air transportation and surface transportation much more quickly than he will pay that difference for a pound of freight.

Hence, a difference in the cost of freight is figured by the shipper, literally, in "cents," and a few cents a pound can mean the difference between getting the business and losing it.

There is nothing new in this, but sometimes we seem to forget some of the fundamental facts of this business.

We in the air-freight business have predicted quite a future for it. The CAB, in its decision in the air-freight case, restated it, and recently the president of one of the major transcontinental carriers said he thought air-freight volume would equal passenger volume in 10 years.

Of course, it will be a long time before air-freight revenue equals passenger revenue, because a pound of passenger traffic brings in three times as much as a pound of air freight.

However, if transportation history proves as true in the air as it has on the ground and on the seas, freight eventually will become the predominant source of revenue.

That time certainly cannot come until we can again lower the cost of air freight to the shipper and the consignee. The major prospect for reduced air freight rates lies in more efficient operation and more efficient operation will be largely attainable in a broad sense only through building of better cargo aircraft.

It seems to me that this prospect is largely in the hands of the Government. The cost of development of such an aircraft is large. In fact, it is so large I doubt that any carrier, or group of carriers, can afford it. Then there is

(Concluded on Page 25)

How London's brokers  
and chartering  
agents applied  
their steamship  
experience to  
chartering aircraft  
for world-wide  
cargo flights



Baltic Mercantile and Shipping Exchange in London

## Cooperation— The Key to Better Chartering

IN 1938, brokers and chartering agents of the Baltic Exchange in London began to do business in chartering aircraft, thereby adding a modern facet to this 200-year-old mercantile and shipping exchange.

The Second World War quickly put a brake on expansion in this direction, but in 1946 the impetus to aviation given by wartime development, especially in air cargo, encouraged Baltic members to recommence their work.

In 1947 a group of brokers, having found the need for mutual collaboration in fixing aircraft and their loads economically, formed the Air Freight Advisory Committee of the Baltic Ex-

By J. L. LOGAN

Secretary

The Airbrokers Association

change, from which the Airbrokers Association was formed February 1, 1949.

The long experience gained on the Baltic Exchange in marrying up tramp ships and cargoes, and in negotiating charters, not only in the United Kingdom, but throughout the world, proved most useful to the airbrokers and chartering agents.

Some 10 percent of the members of the Baltic Exchange have joined the

association, and as business increases so do applications for membership.

Publicity for the work of the Exchange is sought through the national and provincial Press, through chambers of commerce, trade organizations, and the Central Office of Information of the British Government, etc., and so far the response has been good. Market research is also undertaken, the results of which are published simultaneously to all members so they can follow up the leads given.

The association itself does not transact business and is a non-profit making organization, supported by members' subscriptions.

(Continued on Page 16)



Did you know that California is one of America's principal cotton-growing states, and that last year, with a production of 1,300,000 bales, the Sunshine State ranked fourth in cotton production? Take Fresno, for example, which grows most of California's cotton. Growers there depend a great deal on air transportation to get top prices—and United Air Lines has gone a long way in cooperating with the needs of these cotton men. "Redraws"—or samples from specific bales requested by would-be purchasers—used to consume from 10 to 14 days en route. Now, via air cargo, the "redraws" reach the buyers in a matter of hours—and what is most important is that the *sale price usually approximates the market price at the time the original request was made*. That's why growers now are looking to the sky and why . . .

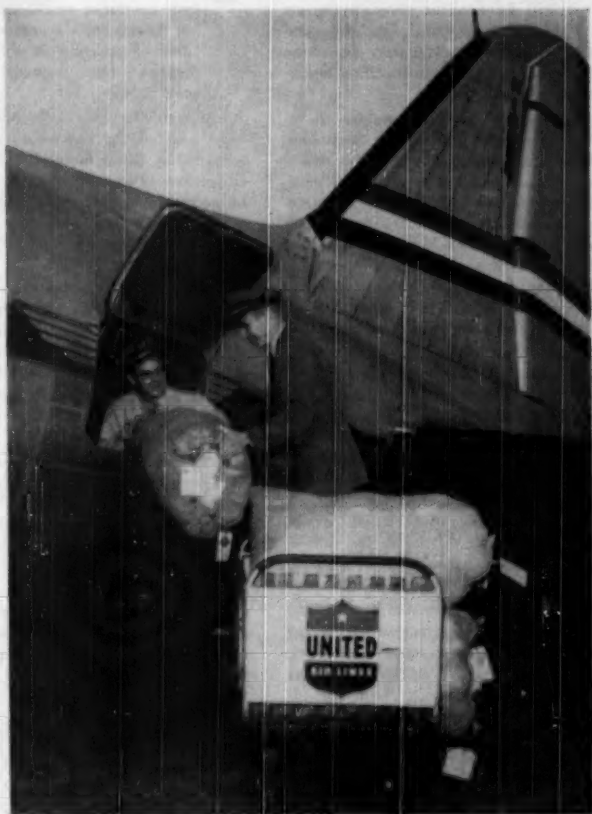
## OL' KING COTTON IS TAKING TO THE AIR



1. MECHANICAL PICKER, capable of gathering 2,700 pounds of cotton in eight hours, goes into action at one of California's cotton ranches, where later . . .



2. FOUR-OUNCE SAMPLES are extracted and sent to United States Department of Agriculture experts for official grading, and after process is completed . . .



3. "REDRAWS", requested by prospective buyers throughout the country, are loaded aboard United Air Lines cargo planes for swift shipment to the East Coast.



# Planning the Air Freight Terminal

BY L. R. HACKNEY

Air Cargo Sales Engineer, Lockheed Aircraft Corporation

## ANALYSIS

This part presents a suggested approach and contents of an analysis in order to obtain the answers to the various items as listed under Objectives.

### Economic Analysis

1. *A Potential Cargo Volume Study* is required in order to ascertain the amount of air cargo which it may be anticipated will be handled by the proposed air freight terminal. These data should be broken down by:

a. Types and volume of commodities that will be handled through the air freight terminal. These data are necessary in order to adequately determine the building and cargo handling equipment requirements.

b. Seasonal variation analysis of various commodities should be conducted. This information is required to establish proper cooling facilities and additional storage area to handle adequately various perishable products which will be handled in large volumes during the different seasons of the year. With the development of the shipment of agricultural and horticultural products by air it is extremely important to have an estimate of the volume in order to provide pre-cooling facilities as well as any special handling equipment necessary.

2. *Potential Revenue Analysis*—A thorough study and an accurate analysis of the total potential revenue which may be anticipated is by far the most important of any study listed herein. Attention must be given to the following potential sources of revenue, with a determination of anticipated amounts.

a. *Air Freight Terminal Rentals*—In order to establish a unit cost per square foot which may be charged to the various airline and freight forwarder lessees:

- (1) A study should be conducted of actual airline terminal costs of certificated passenger carriers. This is a study of costs as they are presently handling air cargo at various competitive air terminals.

## PART II

- (2) After determining the construction and layout considerations covered under "C" of the Objectives (Airport Suitability Consideration) a complete analysis is needed to establish a cost per hundredweight for handling cargo with the proper terminal buildings, cargo handling equipment and apron facilities. It is this figure, compared to the present operating costs, which must be known with a reasonable degree of accuracy in order to establish the terminal rental charge.

b. *Cargo Aircraft Landing Fee Study*—As part of the overall revenue determination listed under "A-2" of the Objectives (Potential Revenue) it will be necessary to prepare a brief review of proper landing fees and revenue that may be expected to be derived therefrom.

c. *Fuel and Oil Sales Analysis*—After arriving at the potential cargo volume, it will be possible to determine the amount of fuel and oil which will be required to supply cargo flights in and out of the proposed freight terminal thus establishing the anticipated revenue from fuel and oil.

d. *Service and Overhaul Business Survey*—At least a brief check should be made of the potential service and overhaul business which may be available from the air cargo activities.

e. *Cold Storage Facility* requirements and the rental which can be anticipated therefrom—Recent studies on perishable and horticultural products verify the advantages of pre-cooling facilities and the revenue expected.

f. Air cargo pick-up and delivery service business should be analyzed for the merits of providing a means of additional revenue. However, it is believed it will be found that the cartage business with its numerous problems and surveillance by the ICC will not be an advisable enterprise.

g. The indirect benefits of both the terminal and its subsidiaries by establishing and operating a major air freight terminal should be evaluated.

h. *Miscellaneous business survey*—A brief check of additional revenue which may be developed from the air freight terminal should be made. This would be developed after the magnitude of the terminal is known as well as air cargo personnel required to man such activities. It is visualized that additional business such as parking areas, restaurants, canteens, etc., will be developed.

### Political Analysis

1. For the most part it will be necessary to complete the economic analysis and construction and layout plans before completing the political analysis. It will be necessary to consider many of the political aspects in detail to furnish the answers to the potential cargo volume and construction and layout plans. Undoubtedly before the final political considerations are determined it will be necessary to contact and discuss the subject with the head offices of the certificated airlines which would be potential customers at the air freight terminal.

2. With the recent certification of several all-freight carriers, an investigation should be made of what may be anticipated in the field of contract freight operations. Such companies will undoubtedly continue to operate, and perhaps others will enter the field.

### Airport Suitability Survey

1. Runway lengths required for proposed and future cargo aircraft in order to determine the life expectancy of the terminal's present runways (if they are already constructed) should be studied. Also, a study should be made of what increase in runway lengths will be required to maintain leadership as a major air freight terminal.

2. Runway strength investigation, taking into consideration cargo aircraft of the 50,000-pound payload class as

(Continued on Page 22)

# AIR CARGO PROFILES...



## L.R. "mike" HACKNEY

AIR CARGO ENGINEER  
FOR LOCKHEED  
AIRCRAFT



SWIMMING IS MIKE'S  
HOBBY - IN HIS SCHOOL  
DAYS HE SWAM AGAINST  
BUSTER CRABBE AND AUSTIN  
CLAPP!



BESIDES HIS OUTSTANDING WORK  
AT LOCKHEED MIKE TEACHES AT  
U of S. C. AND HAS AUTHORED SEVERAL  
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**Bob Bice**  
AIR  
TRANSPORTATION

A NAVY MAN IN  
HIS EARLY YEARS, HE WORKED  
WITH BOTH SERVICES



DURING THE LAST WAR - QUITE A JOB!



(REG. U. S. PAT. OFF.)

**T**HE first two of a fleet of specially converted DC-4 airplanes, aimed at tapping the heavy-freight field, have entered into the service of Northwest Airlines. In service between New York and Seattle-Tacoma, touching key cities along NWA's transcontinental route, the cargo plane fleet was decided upon to "meet growing needs of shippers for more air cargo facilities, including those for heavy items." Maximum payload of an NWA DC-4 cargo plane is nine tons.

According to K. R. Ferguson, vice president-operations and engineering, the converted planes are fitted with large double doors which permit the loading of overseas and odd-size freight, such as motor vehicles, tractors, grand pianos, ship's parts, etc. The equipment so familiar to air travelers—seats, racks, lights, etc.—have been ripped out to make room for freight. With an increase in fuel capacity, shippers now have the benefit of a range of approximately 1,500 miles greater than that of the regular DC-4s.

Westbound intermediate stops are at Detroit, Milwaukee, Twin Cities, Billings, and Spokane; on the eastbound run La Crosse, Wisconsin, may be included.

President-General Manager Cyril Hunter recently announced that Northwest handled its heaviest volume of business last year, producing new highs in revenues. A net profit of \$1,235,405, after taxes, compares with the 1948 net loss of \$787,474.

NWA's Cargo Department reports that 5,600 pounds of Chinese Kolinsky furs for neckpieces were recently flown from the Orient to New York . . . 500 pounds of straw braid for Spring hats were airshipped to New York from Seattle . . . \$70,000,000 worth of Washington State bonds, which will be used to pay bonuses to war veterans of that state, were airfreighted to New York for signing . . . 10,000,000 (yes, ten million) bibles were hauled in an NWA plane bound for Japan.

Latest interline agreements signed by the Flying Tiger Line have been with Braniff International Airways, Chicago and Southern Air Lines, and New England Greyhound Lines, Inc. The agreement with Braniff was signed by Robert V. Woodworth, Flying Tiger interline manager; and W. R. Beattie, Braniff agency and interline sales manager. Woodworth also signed for Flying Tiger in the C&S pact; and G. J. Keller, C&S cargo traffic-sales manager, for the latter. In the agreement with Greyhound, Albert M. Farr, district sales manager in Boston, signed for Flying Tiger; and John K. Whitmore, general traffic manager for the bus company, for Greyhound.

Executive Vice President George T. Cason (see *Guest Air Cargo Editorial* in this

issue) reports that last January's total of 1,438,000 revenue ton-miles was the Flying Tiger's best January and the second best revenue month in the company's history. Compared to January, 1949, the month's revenue shot up 70 percent.

Manufacturers of women's garments will be interested in knowing that Sabena Belgian Airlines is making tremendous use of a specially designed hanging container (made in Belgium) which holds as many as 40 dresses and cinchas with a slide fastener. Hill Butler, Sabena's cargo sales manager, tells us that loads and loads of such cargoes are going overseas in these containers. Savings are in packing costs, weight, and in re-pressing after arrival. Also worthy of note is that dresses as low as the \$6.95 retail bracket are flying across the Atlantic in Sabena aircraft and easily absorbing air freight charges. You'll find similar containers in use by certain domestic airlines.

Beginning April 7, Air France is inaugurating a new luxury nonstop service between New York and Paris. Known as *The Parisien*, the folks over at Air France promise the last word in air transportation. Business travelers, take note!

TACA Airways is now located at 100 East 42nd Street, New York. Phone number: MURray Hill 3-7575. Alvin C. Schreiber, Eastern traffic manager, heads the office.

Braniff International Airways has opened service to Asuncion, Paraguay. It is the seventh Latin American country on Braniff's international route which will be extended to Buenos Aires.

# TRANSPORTATION by



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WOrth 4-3550

Lines Aeropostal Venezolana has won a three-year foreign air carrier permit from the Civil Aeronautics Board which provides for air service between Maricao, Venezuela, and Montreal, via Havana and New York.

Statistics issued by Swissair show the airline to have increased its 1949 traffic over 1948 by almost 1,500,000 miles. Freight traffic was at an all-time high of 4,813,442 pounds. The Swiss airliner operated 98.9 percent of its scheduled flights.

Testifying before the House Interstate and Foreign Commerce Transportation Subcommittee, Earl Slick, president of Slick Airways, urged that passenger airlines be forced to disclose their costs for carrying mail and freight so that "the public and the shippers and the Government can plainly see the amounts these subsidized carriers are losing in the air freight business—and charging off—and can thus get an idea of what air freight would cost the shipper if we, and other all-freight carriers, were forced out of business." He said that his company was not eligible for a subsidy and did not seek it, but that all he sought were "fair rules of the game."

We recommend a handy little booklet, *Reference File of Air Express Uses*, put out by the Air Express Division, REA. For a free copy write: Special Service Department, Air Transportation, 10 Bridge Street, New York 4, N. Y.

For months now, several times each week, the Editorial Department of Air Transportation receives requests for certain statistics on the Berlin Airlift. So, once more, we set forth these figures. During the 11-month blockade which terminated May 12, 1949, and for four months afterward, a total of 2,343,315 tons was flown into Berlin in 277,204 flights. Thirty-one Americans and 30 Britons lost their lives in this historic operation. On the American side of the ledger (included in the above figures) there were 263,472 flights hauling 2,185,247 tons. Total cost to American taxpayers: \$246,698,500. War is never cheap—not even a cold war.

Revision of Pan American World Airways' schedules and changes of equipment have been effected on routes through Mexico and Central America. The new program includes (1) use of Convairs between Guatemala City and Panama, with intermediate stops at San Salvador and Managua, cutting flight time by one hour; (2) nonstop runs between New Orleans and Guatemala City, operating four times

weekly, with DC-4 service on the three remaining days; (3) daily through one-plane service between Mexico City and San Salvador; and (4) the replacement of Guatemala City by San Salvador as PAA's main junction in Central America.

A new schedule revision now makes available a weekly Clipper flight between Miami and Jamaica.

How did Pan Am's freight people do last year? Very well, according to these figures: 37,299,083 revenue ton-miles—an increase of 3,458,425 ton-miles over 1948. Cargo tonnage: 47,704,000 — 7,666,000 pounds better than the year before.

Cargo tidbit: An entire branch office of Pan Am was airshipped from Miami to Port-au-Prince for Haiti's Bicentennial Exposition. The shipment comprised 44 pieces weighing 1,600 pounds.

Panagra is now offering daily service to Havana from South American cities served by the line, as the result of an interline agreement with Pan Am. Connections are made at Miami.

More than 100,000 revenue express and freight ton-miles over the 1948 total have been recorded by Panagra. The carrier hauled 2,510 tons of express and freight last year between the United States and South America, representing an increase of 200 tons of cargo.

The biggest piece of freight ever air-freighted out of South America—a 6,900-pound rotor used in the electric motor of a smelter—was flown from Peru to New York for repairs, and flown back again. In this case, air freight averted shutdown of the Cerro de Pasco Cooper Corporation plant at Oroya, Peru.

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Glenn L. Martin's new Model 4-0-4 transport which Eastern Air Lines and Trans World Airline have ordered to the tune of 65 aircraft—35 for EAL and 30 for TWA. The volume orders—first in more than three years for twin-engine air transports—represent \$35,000,000. With a top speed of cruising altitudes of 312 miles per hour, coupled with unusually low landing speeds, the 4-0-4 will be the first production airliner designed and stressed for conversion to jet engine-driven propellers, when the Air Force releases these power plants for commercial use. Passenger capacity is 40, and the cabin is pressurized and air conditioned. According to C. C. Pearson, president-general manager of the Glenn L. Martin Company, deliveries of the 4-0-4 will begin in the Spring of 1951.

National Airlines has announced additional nonstop service between New York and Miami, using Pan Am equipment. This is the result of CAB approval of a charter agreement between NAL and PAA.

R. E. "Bud" Russ, TWA's cargo director, expects cargo traffic between United States and Italy to climb to the upper reaches as the result of the airline's inauguration of service to Milan. Flights leave New York each Thursday, arriving in Milan the following day. The return run departs from Milan on Tuesday, reaching New York Wednesday. TWA's weekly all-cargo flight has added Milan to its route.

Following are United Air Lines' latest freight rates reductions and their recent effective dates:

February 27—Reductions up to 14 percent on agricultural products, automotive parts and accessories, dry goods and 35 other specific commodities shipped between Boston, New York Newark, Philadelphia, Detroit, Cleveland, and Chicago.

March 5—Reductions up to nine percent on electrical parts and appliances, furs, films, fresh fruits, and 34 other specific commodities shipped between San Diego,

San Francisco, Oakland, Los Angeles, Portland, and Seattle.

March 24—Reductions up to 36 percent on volume shipments of all commodities except furniture, human remains, and a few other restricted items, flown between most major cities on United's coast-to-coast system. Reductions are scaled to 1,000, 2,000, 2,500, 3,000, 5,000 and 10,000 pounds.

March 24—Reductions up to 14½ percent on volume cargoes of furs, fruits, automotive parts and accessories, electrical equipment, and 34 other specific commodities shipped between Portland or Seattle and major eastern cities. Reductions are scaled to 2,000, 3,000, 4,000, 5,000, 7,500, 10,000, 12,500 and 16,000 pounds.

March 24—Reductions up to 27 percent on eastbound 100-pound, all-commodity shipments to major cities, excepting personal effects, gold bullion and other restricted items.

March 25—Minimum weight charge reduced to 25 pounds or \$3.

United reports that cargo traffic, in all categories, rose again in January and February, reflecting a healthy year in 1950.

A couple of months ago, AIR TRANSPORTATION published a feature story on the distribution of that anti-histamine drug,

Inhistone. Carl Stogner, traffic manager of the Anahist Company, Yonkers, New York, manufacturers of the competitive product, reports through American Airlines that air freight was responsible for the distribution of Anahist to 55,000 drug stores throughout the country in two weeks.

"By using surface transportation," he said, "the same operation would have taken months."

Hugh Johnston, director of cargo sales for Trans-Canada Air Lines, reports that 5,913,069 pounds of domestic and international express and freight were flown by TCA last year—an increase of 34 percent over the previous year. Biggest gain was on the line's North Atlantic service where air cargo increased 64 percent. TCA cargo officials are registering more traffic westward from the United Kingdom. Principal articles reaching Canada from Britain are automobile parts and accessories, textiles, drugs, surgical instruments, musical recordings and instruments, and a large assortment of general merchandise.

On TCA's North American routes freight pounds hauled increased from 1,869,944 in 1948 to 2,573,419 in 1949, while express rose 400,000 pounds to a total of 2,179,950 pounds last year.

British Overseas Airways Corporation will inaugurate *Stratocruiser* service between London and Montreal this month. There will be two round trips a week, in addition to two *Constellation* round trips. According to BOAC officials, eventually all London-Montreal runs will be made with *Stratocruisers*.

Beech Aircraft Corporation has received a \$1,500,000 contract for the manufacture of aircraft service parts for the United States Air Force. A portion of the contract will be allocated to the USAF's foreign aid program.

United Air Lines and National Airlines have signed an agreement for space and services at New York International Airport (Idlewild).

Dojama Eastern Corporation, Goddardville, Virginia, is plugging its new-type versatile composing board for air terminals, air flight offices, flight schedules, etc. Special features are its all-plastic composition, eye-appeal, unlimited color range and sizes, etc.

Tying in with the Leipzig Fair, KLM Royal Dutch Airlines last month operated several special flights. KLM also operates flights to the German cities of Hamburg, Dusseldorf, Frankfurt, Nuremberg, and Munich.



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According to Robert Ramspeck, executive vice president of the Air Transport Association (see *The Open Season to More Profits* in March AT), the cost of transporting air mail dropped 15 cents per ton-mile last year as compared to 1948. He made this statement before the House Interstate and Foreign Commerce Committee.

The air mail payments system established by the CAB, he said, is on a sliding scale, so that in the case of the four largest airlines, the more mail they carry, the less they receive per ton-mile. In the case of the other carriers, the more non-mail traffic they carry, the less they receive for transporting mail. Thus, the increased volume of business last year made possible the reduction in the charge for transporting mail from \$1.25% in 1948 to \$1.12% in 1949 per ton-mile. He added that as a result of the efforts of the scheduled airlines to increase non-mail revenues, they produced 42 percent more such revenues in 1949 than they did in 1946, a gross increase of about \$125,000,000.

Pannair do Brasil has purchased a Catalina PB5A from The Babbs Company, Inc., for service on its Amazon River routes. The Brazilian airline now operates five such aircraft, four of which have been purchased from Babbs.

The first text book devoted entirely and exclusively to air freight transportation, written by Richard Malkin, managing editor of *AIR TRANSPORTATION*, and published by LaSalle Extension University, 417 South Dearborn Street, Chicago, is available at \$1.50 per copy. Divided into eight chapters, the manual covers types of air cargo; organization and extent of operations; characteristics of air freight transportation; air freight rates, tariffs, and principles of rate-making; shipping by air freight; how to sell air freight transportation; air freight forwarding; and legislation and regulation. *Air Freight Transportation* is designed for the traffic man.

It was recently revealed that seven



Birdseye view of the Brussels International Fair which opens April 29 and runs through May 14. Exhibition floor space this year will total 1,100,000 square feet, biggest in the history of the Fair. Last year, of the more than 4,000 firms that participated, 373 came from the United States. Most represented category of American products was motors and machine tools, with industrial electricity and electronics running a close second. Other important American products, in the order of their representation, were: mechanical plants and equipment, electrical household appliances, office machines and equipment, heating devices, stationery and office supplies, washing machines—all air cargo items.

DC-4s operated by Transocean Air Lines flew 40 tons of gold bars, worth \$43,000,000, from Japan to the United States. The gold is owned by the Siamese Government and was sent here for deposit in the vaults of the Federal Reserve Bank of New York. Transocean performed the overseas portion of the job, turning over the gold bars to Slick Airways' airfreighters at Oakland for the cross-country flight.

Air Associates, of Teterboro, New Jersey, has established a warehouse at the Miami International Airport, providing expedited service for airlines, airport operators, and export customers in the Miami area. Robert E. Ringle will operate the Miami facilities. The new service center has made arrangements with the Goodyear Tire and Rubber Company to operate the Goodyear Tire Service Exchange Plan which provides adequate stock of tires for airlines.

The member nations of the International Civil Aviation Organization have agreed in substance to a standardization of customs, immigration, and related procedures which will streamline the international movement of air cargo and passengers.

The annual general meeting of the International Air Transport Association is scheduled for October 16-20, 1950, to be held in San Francisco. Warren Lee Pierson, TWA chairman, who was elected president of IATA, will succeed Dr. Albert Plesman, president-director of KLM, on the opening day of the session.

The manufacturing and distribution rights for the Load-Set Weblock, cargo tie-down system developed by the CJW Corporation, North Hollywood, California, has been acquired by Gordon D. Brown and Associates, Los Angeles. The transaction includes purchase of CJW's tooling and inventory, as well as the services of Edwin C. Elmer, president of CJW and inventor of the device.

(Concluded on Page 25)

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**COOPERATION**

(Continued from Page 8)

Membership is limited at present to members of the Baltic Exchange, and the latter functions strictly as an exchange. It does not transact business on behalf of its members or take any fees from business concluded "on the room." Its chief function is to provide a meeting place for brokers and charterers to discuss their own and their principals' requirements.

A spacious and handsome room is provided with adequate telephone facilities, and latest information on maritime and air matters, dining room, bars, arbitration rooms, etc.

Members of the Airbrokers Association have their own notice boards giving details of aircraft, both passenger and freight, on offer by the various brokers, and information on loads available and aircraft offering from foreign exchanges. Brokers and chartering agents get in touch direct with foreign air exchanges should there be any notices which interest them.

No fewer than 50 of the principal British and foreign charter companies—and scheduled airlines—are represented on the Exchange by their appointed brokers.

Every day between 10.00 hours and 16.00 hours members gather to discuss trends in the air chartering market, to offer aircraft, cargoes, or passengers, and to give quotations.

The system of working is really quite simple. Airlines and owners of charter planes appoint a broker (who is already a member of the Exchange) to act for them, and he is known as the "owner's broker." Shippers of cargo also appoint a broker to act for them—the "chartering agent." Any broker can represent as many owners and charterers as he likes, and it is quite usual for a broker to be both an "owner's broker" and a "chartering agent."

When an aircraft owner has a plane available, or requires a return load, he informs his broker, who attends daily at the Exchange. The position of this plane is put up on a "movements board." As there are 50 owners represented on the Baltic, there are frequently a great many movements on view.

Anyone wishing to charter an aircraft, or to ship a quantity of goods which may only represent a part cargo, informs his agent similarly. This load is checked against the aircraft available and the business is negotiated. In many cases, owners and charterers give their brokers a free hand (within limits, of course) to negotiate freight rates. The charterer's agent will know

how much the goods can afford to pay, and the owner's broker will want to get as much as he can for his principal. The finally agreed rate is often a compromise.

Also, when a load is proposed for shipment, aircraft owners compete for it. There are no final freight rates for charter planes, as prices fluctuate from day to day, governed by the number of planes available, the return load state, and the number of owners competing for the cargo.

The Baltic Exchange has built up a code of honorable conduct in the transaction of chartering business and the Airbrokers Association supports that code.

A feature of the work of the association is the drawing up and publication of charter parties. Hitherto in the air charter world somewhat loosely worded and vague contracts have been drawn up by aircraft owners, usually safeguarding their own interests and in many instances imposing rather harsh conditions on the charterers. When contingencies not provided for have happened much time and money have been spent in litigation by the disputing parties.

To help to avoid this the Association has already drawn up and published two charter parties, one the "Baltairvoy," (single voyage cargo charter party), and the "Baltaircon" (consecutive voyages air cargo charter party). Others are in course of preparation for passenger charters, time charters, etc., and the "Baltairnote," which is a consignment note, will shortly be available for sale to the general public.

It is not considered that these are perfect documents. They can only become perfect when they have stood the test of legal battles, but at least a start has been made which has been generously noted and approved by the American Chamber of Commerce in London in August, 1949, issue of *Anglo-American News*.

**"Carta Partita"**

It is interesting to note that the term "charter party," used for a document of affreightment, is a corruption of the "carta partita" used in the 14th Century by the Genoese and Venetian merchants. The document was drawn up and torn in half, each party to it having one part. Claims of title under the contract were proved by fitting the two halves together.

The speed with which charters can be arranged, and the advantage of a central meeting place for developing the market in air chartering is shown by the following example. On behalf of an aircraft owner, whose machine was held up at Juba in the Sudan, a Dakota was chartered to fly out a re-

placement engine together with two mechanics. The same Dakota was to bring back the unserviceable engine to England. As there was vacant space available in both directions the following cargoes were found to assist in reducing the initial cost of the flight to the charterer. One and one-fifth tons of textiles went on the outward flight and were delivered in Nairobi after a stop at Juba to deliver the replacement engine. At Nairobi a consignment of pineapples awaited transport to London. These were loaded and the aircraft returned to Juba to pick up the engine for London. It was known that at Khartoum a rare animal—a piebald donkey—for the London Zoo, required transportation, and the donkey, plus an assistant, was also loaded into the aircraft. The captain of the aircraft was authorised to pick up any other cargoes for which he might have space and to deviate from his direct route to London for the purpose if necessary.

The whole of this transaction was arranged on the floor of the Exchange in less than half an hour.

This is a good example of "tramping aircraft," the more extensive use of which the airbrokers of the Baltic Exchange are trying to encourage.

Although daily activity on the Exchange is limited to some dozen brokers who represent the specific charter companies, the balance of the members of the association use the market as chartering agents.

#### A Cosmopolis

It is interesting to note the cosmopolitan character of London's air market. On Christmas Eve an urgent request came from Cairo for an aircraft to fly out from England to that city to transport two passengers accompanying two corpses—one to Algiers and one to Tunis. Again, recently a request came from Spain for an aircraft to convey an urgently needed iron lung to Barcelona for a child in desperate need of it. Although the mes-

sage was only received by a Baltic Exchange broker at 16.00 hours, a suitable aircraft was found, positioned to the point some 80 miles away where the lung was available, and reached Barcelona before midnight of the same day.

A Belgian aircraft was chartered to fly 2½ tons of penicillin from London to Karachi. The same aircraft picked up at Bombay a ship's crew for Philadelphia, and then embarked a further crew in New York and flew them to Palermo in Sicily.

Thus it will be seen that not only traffic originating in the United King-

dom is handled, but increasing use is being made by foreign charterers of the wide ramifications and experience of the members of the Baltic Exchange.

Startling results are not expected in this new venture and it will take a long time and persistent endeavor to create an international air market. Members of the Baltic Exchange are convinced of the need for, and the value of, such an Exchange, and are therefore working purposefully amidst the many difficulties imposed on the free-lance aircraft operator today.

THE END

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## By N. W. KENDALL

Transportation Division, Office of Domestic Commerce

United States Department of Commerce

# Overseas Air Cargo Services

### I. INTRODUCTION

ONE of the most significant developments in United States air transportation during recent years has been the evolution of cargo service from an adjunct of passenger operations to a recognized service in itself. Postwar expansion of air freight and air express services, made possible to a large degree by war experience, has benefited both the domestic and foreign trades of the United States, albeit in neither trade does air transportation account for more than a fraction of one percent of total tonnage carried. For a number of reasons, however, more attention has been given the appraisal and exploitation of domestic air cargo services than international air cargo services despite the fact that the advantages of the latter were even more dramatically demonstrated during the war period.

Applications for domestic air cargo route certificates have brought to light much information of a type as yet unobtainable concerning international air cargo services. Scheduled and non-scheduled all-cargo operations have been conducted by both certificated and noncertificated air carriers in domestic services, while scheduled cargo operations are not permitted noncertificated carriers in international service. The scale of certificated air cargo operations has been greater, and growth more rapid, in the domestic field. Moreover, United States noncertificated air cargo operations have been relatively less extensive in foreign than in domes-

tic trade. Thus while progress is being made in locating and developing permanent sources of domestic air cargo traffic, total international air cargo potential remains virtually unknown, and probably to a greater extent than in domestic service, unrealized.

This report proposes to furnish, as a contribution to the promotion of air commerce, a general description of the development and characteristics of United States overseas civil air cargo services. That description will include a summary of trends in United States foreign trade by air and total United States foreign trade, together with an outline of the volume of traffic, nature of services, and type of operations performed by the various groups of air carriers participating in the foreign commerce of this country.

A second major purpose of the report is to indicate and discuss briefly some of the problems requiring solution for adequate development of air cargo services between continental United States and other areas. Although no definite estimate of air cargo potential is included, the report will present some projections of potential made by other agencies and will attempt to indicate the short-range outlook for further development of the services under review.

In the main the subject matter is restricted to a general consideration of air cargo (freight and/or express) transportation between, on the one hand, continental United States, and on the other, United States territories

and possessions and foreign countries. To the extent that data permit, foreign flag air cargo operations between the United States and other areas are included. Only incidental references is made to transportation of passengers and mail; and operations of foreign air carriers within or between areas outside the United States are omitted. The scope of the report does not allow a detailed discussion of a number of economic, operating, and regulatory problems which are of international concern and which do not apply particularly to the air cargo services here selected for treatment. Among the specific problems excluded from analysis in this connection are the economics of international air navigation facilities; international air mail pay policy; establishment and control of international air rates; international rights of operation, including settlement of international air carrier landing rights and routes; and taxation of international airlines.

### II. HISTORY

#### (A) Prewar Developments

The history of United States overseas air cargo services prior to World War II is almost exclusively a part of the history of Pan American Airways and affiliated airlines. Pan American was the only United States carrier with important services in the field of international air transportation during the prewar period. To gain the proper perspective, however, it is necessary to discuss briefly certain air transport develop-



ments prior to the origin of the Pan American services.

Commercial airline development throughout the world began at the close of World War I. Wartime research had so improved the performance of the airplane that by 1918 it had become a practical, though imperfect, commercial carrier. Conditions following World War I encouraged many of the leading aeronautical powers to foster airline operations. In the United States, limited development of international air transport occurred during the early postwar years, the major emphasis being on promotion of domestic air mail service. From 1918 until 1926, the United States Post Office Department operated scheduled air services in the United States, pioneering many domestic air mail routes, but few international routes. Enactment of the Kelly Air Mail Act in 1925, providing for Federal air mail compensation to private airlines on the basis of competitive bidding for routes, created the economic foundation for a domestic civil air transport industry. The Air Commerce Act of 1926, administered by the Bureau of Air Commerce, laid the groundwork for technical regulation of airline operations by the Federal Government and Federal promotion of domestic civil aviation through provision of airports, airways and other air navigation facilities. By August 31, 1927, the Post Office Department had relinquished control of domestic air services, and all domestic air mail was carried under contract by private companies.

International United States air mail service, the forerunner of international air cargo service, began on October 15, 1920, between Seattle, Washington, and Victoria, British Columbia. Operations on this route were continued until June 30, 1937. Air mail service from Key West, Florida, to Havana, Cuba, was inaugurated on November 1, 1920 by an airline whose contract with the Post Office Department was terminated in

## BY WAY OF EXPLANATION

SINCE the end of World War II, civil aviation has expanded with extreme rapidity. Of particular significance has been the development of air cargo services both in the domestic commerce of the United States and in overseas services. During the last four years an important new industry has developed in the carriage of cargo by air. In its Industry Reports on Domestic Transportation the Transportation Division has on several occasions analyzed particular phases of the development of domestic air cargo services. The present study, which represents a continuation of the Industry Report series, extends the analysis of air cargo services to those operations which take place in the territorial and foreign trade of the United States.

The purpose of the present report is to measure the importance of existing overseas air cargo services, to describe the characteristics of these services, and to evaluate their effectiveness in meeting the needs of commerce for fast transportation services. The study presents a variety of statistical data on United States foreign trade by air which have not previously been presented in any other publication. Unpublished tabulations of the Bureau of the Census have been compiled in order to present a complete picture of United States foreign trade by air in 1947. Data have been received from a number of international airports and from a large number of overseas carriers in an effort to present a reasonably accurate picture of foreign trade by air in 1948, although the data for this latter year are somewhat incomplete. The data covering the operations of the various carriers engaged in territorial and foreign operations are also somewhat incomplete but it is believed that the information which has been compiled furnishes a far more accurate picture of the nature and extent of foreign and territorial operations than is available elsewhere.

In addition to indicating the volume and direction of United States overseas air cargo services and to describing the nature of the operations conducted by the various carriers, this study makes some effort to appraise the volume of cargo which might move by air. The conclusions which are reached, while far more conservative than the estimates which have been made in other air cargo potential studies, indicate that there is a sizable potential volume of cargo susceptible to overseas air movement. The study accordingly should be of interest not only to the foreign trade community but also to air carriers and the aviation industry generally.

The current study, as previously noted, represents a continuation of the reports which have been issued under the general title "Industry Reports on Domestic Transportation." No further issues of the Industry Report will be made but additional studies of a character similar to the current one will be issued in a new Transportation Report series, of which the present study is the first.

In the preparation of the report valuable assistance was received from a number of the Department's Field Offices located in cities which are leading centers of international air commerce. Particularly noteworthy was the help furnished by the New York Regional Office. A large number of air carriers, scheduled and nonscheduled, also were extremely helpful in supplying the Division with information concerning the nature and scope of their operations. Without the assistance furnished by these carriers, it would have been impossible to present as comprehensive and complete a survey of overseas air cargo services as is contained in the current study.

United States Overseas Air Cargo Services was prepared by N. W. Kendall, under the direction of Paul M. Zeis, Chief of the Transportation Division. Mary Brooks assisted with the compilation of statistical data.

H. B. McGOY, Director, Office of Domestic Commerce.

June, 1921. A contract was then let to another carrier, and service over the Key West-Havana route was performed until March, 1923. From April, 1923 to June, 1934, a so-called foreign air mail route was operated by an air con-

tractor between New Orleans and Quarantine (near the mouth of the Mississippi River). The purpose of this service, like the Seattle-Victoria service, was to carry letter mail to and from a point where connection was made with



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The exact date of the origin of United States international air express service, as distinguished from air mail service, is difficult to determine. Ac-

# NORTHWEST *Orient* AIRLINES

The international air express service  
(Continued on Page 23)

APRIL 1950—PAGE 21

## AIR FREIGHT TERMINAL

(Continued from Page 10)

called for in the Prototype Report, will be required.

3. The approach terrain problem should be carefully explored. This should include consideration of what improved landing aid equipment is necessary.

4. An airport accessibility survey is required taking into consideration future highway developments as well as the increasing traffic congestion problems.

5. A geographical location analysis of the principal shippers and receivers of air freight with respect to the terminal is required. These data are needed to determine if the hub of the industrial and shipping area might be so located as to warrant the selection of some other air freight terminal by the airlines.

6. The meteorological conditions should be evaluated with competing airports for the air freight business.

### Construction and Layout Studies

1. Determination of the basic air freight terminal layout will be the result of simultaneous studies and effort of terminal personnel, equipment handling people and the coordinator of the project.

2. Building configuration and area studies will furnish the basic layout involving the most efficient floor plan as well as space requirements relative to floor area and cubic area. Separate considerations must be given to the elevation plan whether the main floor of the terminal will be at dock-level height or ground-level height. Various template studies with scaled models are required to establish the most efficient apron layout.

### Material Handling Studies

1. Material handling studies will determine to a great degree the building plan form and overall basic arrangement of the terminal. Studies to date

reveal the following methods for handling cargo, which are either in use by the airlines or are being given consideration by them:

a. **Pallet-Fork Truck System**—Loaded pallets are moved by fork truck from warehouse area to airplane and then raised to loading-door level or placed just inside of the airplane door. The cargo is then moved from loading-door to the airplane interior either by hand or conveyor.

b. **Tractor-Train and Fork Truck System**—Loaded cargo carts are coupled to a tractor and towed to the airplane. The cargo carts are then raised by fork truck to the airplane door level.

c. **Tractor-Train and Power Booster Conveyor System**—Loaded cargo carts are coupled to a tractor and pulled to the airplane. The cargo is then raised by a powered portable conveyor from the ground to the airplane.

d. **Skate or Roller Conveyor System**—These systems are described in detail under "Closed Loading System" (Solution).

e. **Cargo Carts and Overhead Dragline Conveyor System**—This system is discussed in detail under "Open Loading System" (Solution).

## Investment and Operating Cost Report

1. Original investment estimates must be prepared separately for the freight terminal building, loading apron, material handling equipment and miscellaneous installations. This will permit proceeding with desired combination of plans, either partially or in entirety.

2. Subsequent investment needs commensurate with expansion requirements must be estimated.

3. An initial operating cost analysis for the proposed air freight terminal should be prepared in detail as well as additional operating costs which will accompany expansion steps.

### Terminal Operator Recommendations

1. At the conclusion of the study of all other factors listed on the foregoing pages recommendations should be presented for the terminal management's consideration on what organization should operate the proposed air freight terminal. In brief, it might be concluded that it would be more advantageous to have some organization construct and operate the terminal on a royalty basis.

(Continued Next Month)

## BOOKS

Don't miss **Hitch Your Wagon**, by Clayton Knight and Robert C. Durham (Hall Publishing Company, Ithaca Hill, Pennsylvania; 182 pages; \$2.50). This is the intriguing story of Ernst Balchen, one of aviation's greats, whose exploits have made indelible history. A vivid personality written about in vivid terms. . . . **Shipstream**, by Eugene E. Wilson (Whittemore House, 220 West 42nd Street, New York; 328 pages; \$4.50), is the autobiography of the former chairman of the Board of Governors of the Aircraft Industries Association. A candid appraisal of the present armed services controversy is meshed with Wilson's story. . . . **G. Lloyd Wilson and Leslie A. Bryan** have come through with an excellent and valuable work to their **Air Transportation** (Prentice-Hall, Inc., 70 5th Avenue, New York; 665 pages; \$7.50). Jammed with information, we recommend it highly.

As always, **Jane's All the World's Aircraft**, compiled and edited by Leonard Bridgman (McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York; \$16.50), holds as an all-important work in the field of world aviation. The 1948-49 edition is divided into four parts: military aviation; civil aviation; airplanes; engines. Fully illustrated. A must in your aviation library. . . . **Leslie A. Sigaud's Air Power and Unification** (Military Service Publishing Company, 150 Telegraph Building, Harrisburg, Pennsylvania; 110 pages; \$2.50) is a treatise on the utilization of air power within our armed forces. General Douhet's principles of warfare are examined as well as their application to the United States. Interesting. . . . **Operation Survival**, by William

H. Howler (Prentice-Hall, Inc., 70 5th Avenue, New York; 282 pages; \$3.00), discusses the United States' new role in world affairs. The B-36, the atom bomb, etc. come under the author's microscope. An outpoken presentation.

The Pitman Publishing Corporation, 3 West 45th Street, New York, has come out with three interesting books: **Private Flying, Today and Tomorrow**, by W. T. Piper in collaboration with D. J. Duffin (296 pages; \$4.50); **Learning to Fly**, by Lieutenant Commander Bert A. Shields (288 pages; \$3.00); and a second edition of the **Private Pilot's Handbook**, by Commander A. G. Norwood (300 pages; \$4.50). All the volumes are illustrated and cover their subjects thoroughly. Written in language you can understand. Each one is a good buy. . . . The official story of the air war in Burma is contained in **Wings of the Phoenix** (British Information Services, 30 Rockefeller Plaza, New York; 142 pages; \$1.25). Illustrated with photographs.

**Inland Marine and Transportation Insurance**, by William H. Rodda (Prentice-Hall, Inc., 70 5th Avenue, New York; 630 pages; \$6.50), is another must on the business library shelf. Divided into seven sections. A fine text. . . . For the air traveler we recommend **Sydney Clark's All the Best in Hawaii** (Dodd, Mead and Company, 435 4th Avenue, New York; 327 pages; \$4.50) which gives you everything you want to know about the territorial islands. Photographs. . . . Now you don't want to do without the new **Hammond's Library World Atlas** (C. S. Hammond and Company, Inc., 1 East 43rd Street, New York; 312 pages; \$2.50) which is an encyclopedia "portraying the march of civilization in word, map, and picture." Includes gazetteer-index of the world, airline distances, Air Age map, reference maps of foreign countries, and maps of individual U. S. states. A wonderful volume.

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## U. S. OVERSEAS AIR CARGO SERVICES

(Continued from Page 21)

of Pan American Airways was inaugurated in 1930. From 1928 through 1931 the company was chiefly concerned with surveying, establishing, and initially operating a vast system of air mail routes in Latin America. Pan American Airways and its affiliate, Pan American-Grace Airways, were the successful bidders on all of the contracts involving air mail routes throughout the Caribbean area and along the east and west coasts of South America which were advertised by the Postmaster General starting March 30, 1928. Operations were initiated from Miami on October 29, 1928. By the close of 1931, Pan American Airways System (including affiliated and subsidiary companies) route mileage totaled more than 24,500, with mail service provided to Mexico, Central America, Cuba, Puerto Rico, the West Indies, and most South American countries.

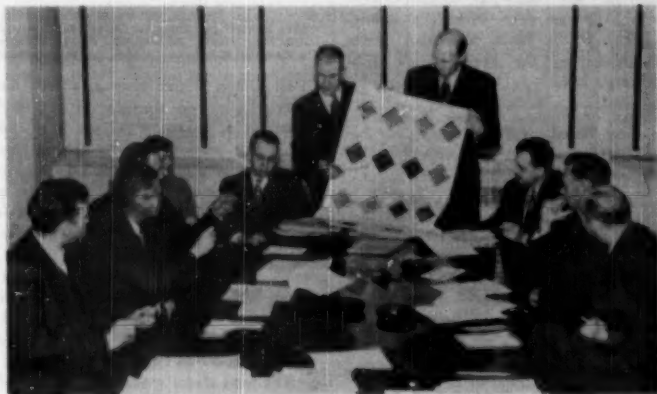
Pioneering of Latin-American air routes was fraught with many difficulties not encountered in the establishment and initial operation of domestic routes. The basic right to fly to and from individual countries had to be obtained through governmental negotiations and partly through the carrier's own efforts. Airways in Latin America had to be created and maintained, and, except in a few large cities, the carrier was required to build its own airports. The necessity of traversing large expanses of water and sparsely settled country, much of it consisting of jungles and mountains, forced the carrier to install new types of equipment and to evolve new techniques of operation and supply. Many other problems stemming from conducting a business in a number of foreign countries with different laws, languages, and customs had to be overcome. At the same time, the market for air transportation in

Latin America was slow in developing owing to the relatively low per capita income of the population. Hence, the United States air carrier pioneering in that area was unable to utilize its equipment, facilities, and personnel as fully as could domestic air carriers as a group.

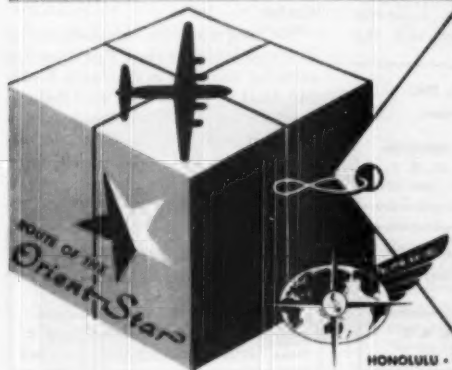
Panagra commenced developing its air express business as early as 1931. In connection with its operations within and between certain South American countries, it eventually developed an appreciable volume of bulk air freight, as distinguished from the low-weight, high-value commodities usually carried in air express service. Examples of air freight traffic carried were emergency shipments of heavy machinery, parts

and spares in case of plant breakdown, occasional shipments of bulky goods to points reached only with great inconvenience by surface transport, and regular planeload shipments of low-value goods to areas virtually inaccessible by any other means of transportation. Express traffic was promoted through personal solicitation, since it was found that many potential users confused the service with air mail. COD services with customs clearance and store or house door delivery were established in some countries. Since Panagra did not operate to or from continental United States, it worked jointly with Pan American Airways in transporting express traffic between the United States and points on its route along the west coast of South America and extending to Buenos Aires.

Express traffic over the Latin American routes of the Pan American Air-



A recommended list of specified dangerous articles for use among IATA-airline cargo departments has been drawn up by the International Air Transport Association's Cargo Handling Working Group (above). It is expected that shippers and freight forwarders will find their job considerably easier when using the list, which is linked with statements of the conditions and limitations under which articles may or may not be hauled on regular air services. Left to right are: Harry Gibbons, IATA; J. T. Hendren, Pan American World Airways; M. E. A. L. de Jong, KLM Royal Dutch Airlines, chairman of the group; Paul Lamoureux, Trans-Canada Air Lines; J. E. Gillham, Pan Am; O. B. Tomkins and A. F. Devenish, TCA; K. F. Ridley, Trans World Airline; and T. H. Bontenbal, KLM. Dudley Evans, of Scandinavian Airlines System, and W. R. McNab of TWA, also members of the group, do not appear.



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ways System increased rapidly from the beginning, though the volume carried remained relatively small for a number of years. Total System air express handled rose from 12,156 pounds in 1930 to 961,076 pounds in 1934. In the latter year, arrangements concluded with the Railway Express Agency, Inc., greatly increased the territorial coverage and the available connecting ground services of Pan American's international express services. Under contracts signed by the two agencies in August, 1934, the REA agreed to make available its 23,000 offices in the United States as receiving stations for air express shipments to foreign destinations served by Pan American and as delivery stations for air express shipments from foreign points. Table 1 shows the trend in express revenue, total commercial revenue, and total revenue, including commercial revenue plus United States mail pay, of Pan American Airways (not including subsidiaries) in its Latin American operations during the period from 1931 through 1943.

TABLE 1.—Express Revenue, Total Commercial Revenue and Total Revenue of Pan American Airways, Inc., Latin American Operations, 1931-43  
[In thousands of dollars]

Year	Express revenue	Total commercial revenue	Total revenue, including U.S. mail pay
1931	8	1,378	5,991
1932	19	1,210	6,081
1933	40	1,406	6,303
1934	64	2,043	6,904
1935	111	2,326	6,856
1936	194	3,461	7,659
1937	278	4,654	9,076
1938	369	5,258	10,044
1939	420	6,400	11,070
1940	590	7,982	13,133
1941	842	11,149	16,644
1942	2,707	19,025	23,271
1943	3,248	22,406	24,360

Several years' experience in relatively long flights over the Caribbean provided the basis for establishment of regular transoceanic service by Pan American. On October 24, 1935, the

TABLE 2.—Pounds of Express Carried by Pan American Airways, Inc., by Division, During Specified Years

Year	Latin American Division	Pacific Division	Atlantic Division	Alaska Division
1930	*12,156	0	0	0
1931	*135,745	0	0	0
1932	*298,815	0	0	0
1933	*764,199	0	0	0
1934	*961,076	0	0	0
1935	"	0	0	0
1936	"	*6,941	0	0
1937	"	16,283	0	0
1938	873,605	18,730	0	0
1939	1,019,335	37,026	0	0
1940	1,076,203	69,027	*108	*19,612
1941	1,754,014	*146,711	*15,725	47,147
1942	5,683,541	"	"	*74,847
1943	7,784,961	"	"	"

\* Includes both North Pacific and South Pacific routes.  
 \* Commercial air service to Bermuda began in June 1937, but apparently no express was carried in the Atlantic Division until November 1940.  
 \* Data do not cover operations of subsidiaries operating within Alaska.  
 \* Data for years 1930-34 refer to entire Pan American Airways System; those for years 1938-43 only to Pan American Airways.  
 \* Not available in docket included.  
 \* Operations apparently began Feb. 22, 1936.  
 \* November and December only.  
 \* July through December.  
 \* Jan. 1-Dec. 7.  
 \* According to the company, trans-Atlantic express service began on Sept. 25, 1941; from November 1940 through September 1941, however, 6,988 pounds were carried in "mid-Atlantic" (Bermuda) service.  
 \* January through August.  
 \* Source: Exhibits No. PA-83 and PA-84 in Docket No. 525; Exhibit No. PA-111 in Docket No. 547; Exhibit No. PA-4 in Docket No. 855; and Exhibit No. PA-125 in Docket No. 547, for Latin American, Pacific, Atlantic and Alaska Divisions, respectively.

Post Office Department awarded that carrier the first transpacific air mail contract at a rate of \$2 per mile, the maximum permitted under the Foreign Air Mail Act of 1928. Scheduled air-mail operations across the Pacific began with the round trip between Alameda, California, and Manila, November 22 to December 6, 1935. Express service on this route was inaugurated in February, 1936, and passenger service in October, 1936. Pan American's service was extended from Manila to Hong Kong in 1937.

The next major overseas extension of service by Pan American Airways was establishment of transatlantic services between the United States and Europe. Mail service got underway with a round trip flight, Port Washington, New York, to Marseilles, France, during the week May 20-27, 1939. Operations were conducted pursuant to a certificate of public convenience and necessity granted by the Civil Aeronautics Authority rather than under contract with the

Post Office Department. Until the passage of the Civil Aeronautics Act of 1938, United States international airlines had no operating franchise other than their mail contracts, which in the case of Pan American were due to expire in that year. The transatlantic service of Pan American represented the first grant of permanent operating authority to an airline operating from the United States in transoceanic service. Pan American's initial scheduled transatlantic passenger flight was made on June 28, 1939. The British airline, Imperial Airways, Ltd., also commenced transatlantic flights in the summer of 1939. Carriage of transatlantic express by Pan American was inaugurated on September 25, 1941. During 1941 Atlantic services were expanded with initiation of service from Portuguese Guinea to the United States in February and between the United States and the Belgian Congo in December.

Not long after the establishment of its transatlantic services, Pan American extended its routes to the South Pacific and Alaska. The first air mail flight in South Pacific service left San Francisco for Auckland, New Zealand, on July 12, 1940, the first passenger flight on September 13, 1940. Express service on this route was also originated in

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1940. As early as 1932, Pan American had started operating air services within Alaska. In that year the company purchased through a subsidiary the equipment and facilities of two Alaskan airlines engaged in various charter operations and in performing mail service under a number of Star Route mail contracts. Weekly service between Juneau and Fairbanks for passengers and express was established in April, 1935. In June, 1940, the company began scheduled service between Seattle and Juneau.

Table 2 summarizes the statistics submitted by Pan American to the Civil Aeronautics Board in Docket Nos. 525, 547, and 855 pertaining to air express traffic in the various overseas services.

Except for the limited transatlantic service offered by Imperial Airways, Ltd. (merged in 1939 with another British airline to form British Overseas Airways Corporation) and operations between the United States and Canada and Mexico via domestic and foreign airlines, overseas air services to and from the United States in the prewar period were conducted exclusively over the lines of the Pan American Airways System. The following résumé of the history of United States overseas air cargo services prior to 1942 therefore is based largely on Pan American's operations.

First, the conclusion is evident that air cargo services to and from continental United States were developed to a limited degree prior to World War II. While scheduled United States international air express service began in 1929 with operations to Canada, the real pioneering development was the extension of air services through Latin America. Transpacific air express operations were not initiated until 1936 and the volume of traffic remained relatively small for the remainder of the prewar period. Transatlantic and United States-Alaska air express services, inaugurated in 1940, were rudimentary when the United States entered the war.

While Pan American Airways generated a steadily increasing volume of express traffic between 1930 and 1941, Tables 1 and 2 reveal that in 1941 that carrier moved only 877 tons of express, accounting for approximately 5.1 percent of total revenue, in its Latin American operations.

Second, prewar international air express was a very high-priced service suitable in the main only for shipments in which speed, rather than economy, was the determining factor in the user's choice of transportation. Data showing the average level of international air express rates in the prewar years are not readily available, but the fact is clear that charges were much too high to attract a large volume of traffic. A clue to the rate level is Pan American Airways' proposal in 1944 of a rate structure in which the average air cargo rate would be reduced from 80 cents to approximately 25 cents per ton-mile. It was stated that air express rates had remained unchanged since 1933. According to a student of Latin American aviation, rates charged for international air express in the prewar period ranged from \$0.80 to \$1.30 per ton-mile. The types of traffic attracted by the high prewar air express rates are illustrated in Table 3.

TABLE 3.—Composition of Air Express Traffic of Pan American-Grace Airways Originated at Four South American Cities During 1940

Commodity	Percent of total number of shipments
Valuable shipments, gold, platinum, currency, etc.	21.5
Medicine, pharmaceutical products	15.8
Films	9.7
Cut flowers	7.8
Samples	7.8
Newspapers	7.2
Printed matter	5.8
Documents and legal papers	3.9
Spare parts	3.6
Clothing and personal effects	2.8
Textiles	1.2
Foodstuffs	1.0
Leather goods	0.5
Miscellaneous	11.4
All commodities	100.0

(Continued Next Month)

## GUEST EDITORIAL

(Continued from Page 7)

the additional fact that we probably need two types of cargo aircraft—long haul and short haul. So the development cost is thus greatly increased.

If we ever get into another national emergency, the cargo airplane is going to be as important to this nation as the boxcar and truck always have been. Therefore, it is only reasonable to assume that the Government should undertake this development primarily as a matter of national defense, permitting the air-freight carriers to develop and prove the ideal type of aircraft.

We can go along on our future with present aircraft. Better aircraft will greatly enlarge this future, but in a national emergency a better cargo aircraft will mean much more to this country than it will ever mean to the operating carriers.

The need of doing this developmental job is a great need and one of the major responsibilities of our industry is to see that the Government fully understands that need. Irrespective of how we may feel about rate matters, this problem of aircraft development is one where it would seem united industry action is possible and is, in fact, a major responsibility as a duty to our country.

## AIR COMMERCE

(Continued from Page 15)

A contract calling for the maintenance and overhaul of Seaboard and Western Airlines' entire airfreighter fleet on a fixed-price-per-flight-hour basis has been signed by the carrier and Lockheed Aircraft Service. Under the provisions of the agreement, which is the most extensive and significant for a four-engine operation ever concluded in the industry, S&W guarantees LAS an annual minimum of 6,700 flight hours, involving an estimated minimum expenditure of \$350,000.

It was pointed out that the S&W-LAS contract "represents the climax in a growing trend of fixed price maintenance and overhaul." When, after the war, independent firms initiated commercial contract maintenance and overhaul operations, the charge method was on a time and materials basis.

LAS has the exclusive right to inspect, maintain, and repair all of S&W's Air-traders, with the exception of engines and in-transit inspections which are performed outside of the country.

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**HUGH W. COBURN**, vice president-traffic, Mid-Continent Airlines, was recently elected president of the Air Traffic Conference. Other officers elected: **WALTER STERNBERG**, vice president-traffic, National Airlines, first vice president; and **JAMES W. AUSTIN**, vice president-traffic and sales, Capital Airlines, second vice president.

**G. K. GRIFFIN** and **G. J. BRANDEWIEDE** have been named by American Airlines to the respective posts of vice president-personnel and vice president-maintenance and supply. . . . Congratulations to **LINUS C. GLOTZBACH**, vice president and assistant to President Cyril Hunter of Northwest Airlines, who has been named to membership on two important committees of the American Bar Association. . . . **OTIS E. KLINE** has been elevated to the position of executive assistant to the president of United Air Lines.

**RICHARD L. JOHNSON** has joined the Glenn L. Martin Company as assistant to the president. . . . **STANLEY MEYER** has joined the members of Colonial Airlines, Board of Directors. . . . **FRANK DOWD** has filled the vacancy on the board of Piedmont Aviation, Inc. . . . Newark

board members of Bendis Aviation Corporation are **GEORGE E. STOLL** and **C. S. HARDING MOTT**.

### ★ SALES ★ TRAFFIC

TWA has announced the appointment of **J. N. MARTIN** as general manager for the Atlantic Region. . . . **ROBERT W. KELLHOFER** has taken over the management of the Sales and Service Department of the Fairchild Aircraft Division. . . . **HERBERT F. MILLEY** has been appointed traffic manager for Pan American World Airways' Pacific-Alaska Division. **GEORGE L. STREHLKE** is now serving as central regional sales manager of Pan Am. District traffic managerships have gone to **CHARLES MAHER**, at Cristobal and Colon; and **HENRY M. CROOK**, at Ciudad Trujillo.

**J. D. GARDNER**, one of the Flying Tiger Line's oldest employees, has been appointed manager of rates and tariffs. . . . Northwest Airlines reports that **WILLIAM C. KELLEY** has been named assistant district traffic manager at Detroit, and that **CHARLES L. KIRK, JR.**, and **EMMETT J. GEARHART**, senior traffic representatives, have been shifted to Tokyo. . . . **J. M. KLAPP** is now serving as superintendent of government sales for United Air Lines, and **DANIEL C. SUDBRING** has been named district traffic and sales manager of Connecticut.

Eastern Air Lines has promoted **HAROLD R. WATSON** to the post of convention sales manager. . . . At National Airlines, **LINDSAY O. HOLT, JR.**, has been named district sales manager in Charleston and Savannah. . . . Greer Hydraulics, Inc., has appointed **KEVIN G. WINKER** sales engineer, and **THEODORE F. BRICK** district manager of the Dayton office.



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### ★ CARGO ★

**L. R. SAMPSON** has been named city manager of cargo sales in Montreal for Trans-Canada Air Lines. . . . **E. L. DARE** is United Air Lines' new manager of air cargo sales, succeeding **M. P. BICKLEY** (see *Air Cargo Profile* in July, 1948, AT) who has been elevated to the position of Eastern regional manager of sales. Dare has been with United for the past 18 years.

## AIR FREIGHT FORWARDERS

**NO** petition for a writ of certiorari has been filed by the airlines with the Supreme Court in Chicago—and since the deadline was March 8, the final chance of the airlines for getting a reversal of the CAB decision authorizing air freight forwarder operations has been turned aside. Thus, the airlines have given up their battle to keep freight forwarders out of the air freight business.

It is understood that many freight forwarders, who up to now played a wait-and-see game, are preparing to file for operating authority.

A recent advertisement by Northwest Airlines (see March issue) established precedent when it included the names of 21 domestic air freight forwarders recognized by NWA. These were:

ABC Freight Company, Ace Air Freight Company, Airborne Coordinators, Airborne Flower and Freight Traffic, Air Dispatch, Air Express International Agency, Air Freightways, Air Lanes Service, All-Air Freight Company, Allied Air Freight, Peter A. Bernacki, W. J. Byrnes and Company of New York, Cloud Lane, Domestic Air Express, Emery Air Freight Corporation, Flying Cargo, International Veterans Airlines, Skyways Freight Forwarding Corporation, Twin Cities Air Service Company, Video Producers and Distributors, The Trans-Export Company.

► **Air Express International:** New branch offices have been opened in Chicago at 801 South Sherman Street. Heading the office is Ignatz Grofik, district manager, who is assisted by Ralph Mesger, export manager. Both veterans of AEL, Grofik and Mesger have an extensive background in the import-export industry. The firm now operates 10 offices.

► **Air-Sea Forwarders:** Paul R. Williams, president, is on a business trip through the Pacific area, and is expected to visit Honolulu, Tokyo, Hong Kong, and Manila, among other key points. It is understood that Williams will seek to establish agencies in that part of the world.

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Air cargo rates quoted are based on prevailing tariffs, subject to change.

Shippers are warned, however, that these rates are subject to change.

All international rates are quoted on an airport-to-airport basis, with the pickup and delivery charges wholly apart. Air carriers whose schedules and rates are included here are indicated by the letter following the airport symbol (see below).

### AIRPORT SYMBOLS

EDP—Amsterdam	MEM—Memphis
SAL—Baltimore	MEX—Mexico City
BGR—Bangor, Me.	MIA—Miami
BOS—Boston	MKE—Milwaukee
BRO—Bremen, Ger.	MPS—Minneapolis-St. Paul
BUC—Bucharest, Rou.	MRS—Mobile
BTU—Burlington, Vt.	UL—Montreal
CHS—Charlotte, N. C.	MSY—New Orleans
CHI—Chicago	LGA—New York (La Guardia)
CLE—Cleveland	IDL—New York (Idlewild)
CRP—Cruz Roja, Mex.	EWK—Newark
CTB—Culb. Bank, Mont.	ORF—Norfolk
DAL—Dallas	MDL—New York, Md.
DMH—Denver	OAT—Oakland, Calif.
YIP—Detroit	POR—Portland, Ore.
DLH—Duluth	PDX—Portland, Ore.
ELD—El Dorado, Ark.	PIT—Pittsburgh
ELP—El Paso	POR—Portland, Ore.
EVV—Evansville, Ind.	PVD—Providence
FWA—Fort Wayne, Ind.	QY—Quebec, N. S.
FTW—Fort Worth	STL—St. Louis
GFK—Grand Forks, N. D.	SLC—Salt Lake City
GRW—Greenwood, Minn.	SAT—San Antonio
BOL—Hartford	SFO—San Francisco
HAV—Havana	SGF—Springfield, Mo.
HOU—Houston	SEC—Seattle
HNL—Honolulu	SHV—Shreveport, La.
IND—Indianapolis	OGG—Spokane, Wash.
JAN—Jackson, Miss.	SGF—Springfield, Mo.
JAX—Jacksonville	TPA—Tampa
MKE—Kansas City, Mo.	MUF—Torr. Haste, Ind.
KIN—Kingston, Jam.	TOL—Toledo, Ohio
LND—London	YTO—Toronto, Ont.
LIT—Little Rock, Ark.	VR—Vancouver, B. C.
LAX—Los Angeles	DCA—Washington, D. C.

### AIRLINE SYMBOLS

AF—Air France
A—American Airlines
AO—American Overseas
B—British International Airways
BO—British Commonwealth Pacific Airlines
BR—British Overseas Airways Corp.
CS—Chicago & Southern Air Lines

C—Criminal Airlines
EA—Express Aeron Interamericana
K—KLM Royal Dutch Airlines
N—National Airlines
NE—Northeast Airlines
NW—Northwest Airlines
P—Pan American World Airways and a7 Inter
PH—Philippine Air Lines
S—Sulair
SS—Southwest Airlines System
SW—Swire Orient Airways
TK—TWA Airways
3R—Seamair
TA—TACA Airways
T—Trans-Canada Air Line
TC—Trans Caribbean Air Line
TR—Transamerica Air Lines
TW—Trans World Airline
U—United Air Lines
W—Western Air Lines

### SPECIAL NOTES

- COMMODITY RATES: Apply to airlines.  
AO: Valuation charge is applicable only on shipments with a valuation of over \$7.48 per pound. Minimum charge is \$2 for 7 kilos (4 lbs.).  
K: Valuation charge is only on shipments with a declared valuation in excess of \$7.71 per lb.  
P: Valuation charge is only on shipments with a declared valuation in excess of \$7.71 per lb.  
PH: To any destination in the Philippines served from Manila by PAL, where routing is via PAL from San Francisco, add 10¢ per pound to rates shown as applying to Manila.  
SK: Lower rates for cargo of 1,000 lbs. gross weight and over. Planned service minimum is 14,000 lbs. Minimum weight charge of \$1 on all shipments.  
SW: Special rates for shipments of 1,000-2,000 lbs. and 2,000-5,000 lbs.  
T: More economical rates are offered for bulk cargo. There is a basic rate for cargoes 25 pounds and less, between 25 pounds and 100 pounds, and over 100 pounds. Consult the airline direct.  
TC: Cheaper "deferred" rate available. Contact airline direct.  
\* This involves no extra charge by another airline.  
1 Minimum charge for this shipment is that for 55 lbs.  
2 Rate of 25 lbs. or less.  
3 Minimum weight 50 lbs.  
4 Planned service only.  
5 Consult airline for lower rates applicable to 1,000 lbs. and over.  
6 Daily freighter service.  
7 Via Truck to Miami.

### RATE SYMBOLS

- \* This involves no extra charge by another airline.  
1 Minimum charge for this shipment is that for 55 lbs.  
2 Rate of 25 lbs. or less.  
3 Minimum weight 50 lbs.  
4 Planned service only.  
5 Consult airline for lower rates applicable to 1,000 lbs. and over.  
6 Daily freighter service.  
7 Via Truck to Miami.

Destination	Airport and Airline	RATES (See Note)					Depart
		Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	
Antofagasta, Chile	MIA P	1.12	81	15	M.T.F.		
"	MSY P	1.19	88	15	M.T.F.		
"	HOU P	1.23	71	15	M.T.F.		
"	BRO P	1.22	71	15	M.T.F.		
"	CRP P	1.22	71	15	M.T.F.		
"	LAX P	1.23	85	15	M.T.F.		
Antwerp, Belgium	IDL AO*	1.00	82	21	Dly		
"	IDL P*	1.07	80	21	Dly		
Any Destination in Colombia or other Latin American States	MIA P	79	49	15	Dly		
"	MSY P	1.14	80	15	Dly		
"	HOU P	1.28	15	15	Dly		
"	BRO P	1.20	15	15	Dly		
"	CRP P	1.20	15	15	Dly		
"	LAX P	1.27	80	15	Dly		
Aracaju, Brazil	LGA P	1.20	84	15	W.F.S.		
"	MIA P	1.12	82	15	W.F.S.		
"	MSY P	1.19	88	15	W.F.S.		
"	HOU P	1.23	71	15	W.F.S.		
"	BRO P	1.22	71	15	W.F.S.		
"	CRP P	1.22	71	15	W.F.S.		
"	LAX P	1.27	80	15	W.F.S.		
Armeda	EWK TC	.20	.20		Frequently		
Arrecife, Peru	MIA P	1.00	83	15	W.F.S.		
"	MSY P	1.19	88	15	W.F.S.		
"	HOU P	1.23	71	15	W.F.S.		
"	BRO P	1.22	71	15	W.F.S.		
"	CRP P	1.22	71	15	W.F.S.		
"	LAX P	1.27	80	15	W.F.S.		
Arica, Chile	MIA P	1.00	83	15	M.T.F.		
"	MSY P	1.19	88	15	M.T.F.		
"	HOU P	1.23	71	15	M.T.F.		
"	BRO P	1.22	71	15	M.T.F.		
"	CRP P	1.22	71	15	M.T.F.		
"	LAX P	1.27	80	15	M.T.F.		
Armenia, Colombia	MIA P	.84	29	15	Dly		
"	MSY P	.80	25	15	Dly		
"	HOU P	.83	25	15	Dly		
"	BRO P	.83	25	15	Dly		
"	CRP P	.83	25	15	Dly		
"	LAX P	.84	27	15	Dly		
"	HOU P	.81	25	15	T.T.F.S.		
"	CHI P	.83	25	15	T.T.F.S.		
"	YIP P	.83	25	15	T.T.F.S.		
"	AD P	.83	25	15	T.T.F.S.		
"	EVV P	.83	25	15	T.T.F.S.		
"	FWA P	.83	25	15	T.T.F.S.		
"	HRW P	.83	25	15	T.T.F.S.		
"	BIT P	.83	25	15	T.T.F.S.		
"	HOU P	.83	25	15	T.T.F.S.		
"	IND P	.83	25	15	T.T.F.S.		
"	JAN P	.83	25	15	T.T.F.S.		
"	LIT P	.83	25	15	T.T.F.S.		
"	MEM P	.83	25	15	T.T.F.S.		
"	MSY P	.83	25	15	T.T.F.S.		
"	PIK P	.83	25	15	T.T.F.S.		
"	PJA P	.83	25	15	T.T.F.S.		
"	STL P	.83	25	15	T.T.F.S.		
"	SHV P	.83	25	15	T.T.F.S.		
"	HUP P	.83	25	15	T.T.F.S.		
"	TOL P	.83	25	15	T.T.F.S.		
Arica, N.W.I.	MIA K	.20	.22	15	Dly		
Asmara, Eritrea	IDL AO*	1.70	1.22	80	Dly		
"	BOS AO*	1.74	1.30	80	Dly		
"	IDL BO	1.74	1.31	15	M.T.F.		
Asuncion, Paraguay	LGA P	.47	.47	15	T.F.		
"	MIA P	.47	.47	15	T.F.		
"	MSY P	.47	.47	15	M.T.F.		
"	HOU P	.47	.47	15	M.T.F.		
"	BRO P	.47	.47	15	M.T.F.		
"	CRP P	.47	.47	15	M.T.F.		
"	LAX P	.47	.47	15	M.T.F.		
"	EWK TC	1.70	1.80	80	Frequently		
Athens, Greece	IDL AO*	1.41	1.06	15	Dly		
"	IDL BO	1.41	1.11	15	Dly		
"	LGA TR	.20	.20	15	Dly		
"	BFD TR	.20	.20	15	Dly		
"	IDL SW	.20	.20	15	Dly		
"	IDL BO	1.41	1.07	15	M.T.F.		
"	IDL AF	1.42	1.07	15	Weekly		
"	HOU AF	1.40	1.05	15	Dly		
"	IDL K*	1.41	1.06	15	Dly		
"	IDL BO	1.41	1.07	15	M.T.F.		
"	LGA TR	.44	.44	15	M.T.F.		
"	ICA TR	.44	.44	15	M.T.F.		
"	CHI TR	.44	.44	15	M.T.F.		
"	PBL TR	.44	.44	15	M.T.F.		
"	HOU TR	.44	.44	15	M.T.F.		
"	YIP TR	.44	.44	15	M.T.F.		
"	EWK TC	1.60	1.60	80	Dly		
"	IDL BO	1.41	1.07	15	M.T.F.		
"	IDL BO	1.41	1.07	15	M.T.F.		
"	CHI U*	1.40	1.04	15	M.T.F.		
"	YIP U*	1.47	1.19	15	M.T.F.		

Destination	Airport and Airline	RATES (See Note)					Depart
		Per 100 Lbs.		Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	
		U.S.	Int'l.	Over 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	
Aalborg, Denmark	IDL AO*	1.18	.84	21	Dly	except Th	
"	IDL BO	1.13	.83	15	Dly	except Th	
Aalborg, Denmark	IDL BO	1.13	.83	15	Dly	except Th	
Abadan, Iran	IDL BO	1.67	1.36	15	M,T,F		
"	BOS AO*	1.67	1.38	30	Th		
"	IDL AO*	1.70	1.27	30	Dly		
Abo, Finland	IDL BO	1.19	.80	15	Dly		
"	IDL AO*	1.16	.80	21	M,T,F		
"	BOS AO*	1.19	.80	21	W,F		
Acre, Br. Unit	LGA P	1.89	1.47	15	M,T		
Aden	BOS P	1.86	1.45	15	M,T		
"	IDL BO	1.86	1.45	15	M,T,T,F		
"	IDL AF	1.73	.83	15			
"	BOS AF	1.73	.80	15			
"	BOS AO*	1.73	1.38	30	Th		
"	IDL AO*	1.76	1.31	30	Dly		
Aden Ababa, Ethiopia	IDL AO*	1.91	1.43	30	Dly		
"	BOS AO*	1.98	1.41	30	Th		
"	IDL BO	1.80	1.41	15	M,T,T,F		
"	EWB T	1.65	.80	15			
"	LGA TW*	1.83	1.39	25	M,T		
Aden, Aden	IDL AO*	1.94	1.35	30	Dly		
"	BOS AO*	1.81	1.28	30	Th		
"	IDL BO	1.81	1.30	15	M,T,T,F		
"	IDL AO*	1.96	1.47	30	Dly		
Almohamed, India	LGA P	2.28	1.67	T,F			
Almohamed, India	IDL BO	1.89	1.15	15	M,T,T,F		
Alexandria, Egypt	LGA TW	1.27	.86	25	M,T		
Algiers, Algeria	IDL AO*	1.31	.87	21	Dly		
"	IDL AF	1.34	.90	15	Dly		
"	BOS AF	1.22	.91	15	W,F		
"	EWB T	1.22	.89	15			

## INTERNATIONAL CARGO TABLES—Continued

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**INTERNATIONAL CARGO TABLES—Continued**

RATES (See Note)									
Destination	Aircraft	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
		Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100
		lb	kg	lb	kg	lb	kg	lb	kg
Destination	Aircraft	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
		Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100
		lb	kg	lb	kg	lb	kg	lb	kg
Caracas, Venezuela	MIA P	44	20	15	Dy				
	LGA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Caracas, Venezuela	BRO P	120	100	15	Dy				
	IDL AO	141	100	21	Dy				
	BRO AO	120	100	21	Dy				
	IDL AO	127	100	21	Dy				
	BRO AO	126	101	15	Dy				
	IDL BO	126	101	15	Dy				
	IDL AO	120	97	21	M, W, Sa				
	BRO AO	127	96	21	M				
Caracas, Venezuela	LGA P	70	42	15	M, Th				
	MIA P	60	20	15	M, Th				
	MSY P	70	42	15	M, Th				
	BRO P	70	42	15	M, Th				
	CRP P	70	42	15	M, Th				
	LAX P	87	60	15	T, Sa				
Cayman Islands, Cayman	MIA P	18	12	15	Dy				
	MIA P	33	16	15	Dy				
	MSY P	38	18	15	Dy				
	BRO P	32	22	15	Dy				
	CRP P	31	31	15	Dy				
	LAX P	47	34	15	Dy				
Christiansburg, Norway	IDL AO	120	91	21	M, W				
	BRO AO	121	91	21	F				
	IDL K	113	85	15	F				
Ciudad Juarez, Mexico	MIA P	31	16	15	Dy				
	MSY P	27	15	15	Dy				
	BRO P	26	15	15	Dy				
	CRP P	25	10	15	Dy				
	LAX P	30	19	15	Dy				
Ciudad Trujillo, D. R.	LGA P	35	21	15	Dy				
	MIA P	15	13	15	Dy				
	MIA K	15	13	15	Dy				
	EWRTC	45	30	15	Frequently				
	BRO SK	45	30	15	Frequently				
	MSY SK	45	30	15	Frequently				
Ciudad Victoria, Mexico	IDL B	20	10	15	Dy				
	FWB	20	10	15	Dy				
	SAT B	20	10	15	Dy				
	LKD B	10	10	15	Dy				
Ciudad Juarez, Mexico	MIA P	112	61	15	M, W, F, Sa				
	MSY P	110	60	15	M, W, F, Sa				
	BRO P	122	71	15	M, W, F, Sa				
	CRP P	122	71	15	M, W, F, Sa				
	LAX P	125	85	15	M, W, F, Sa				
Colombia, Any Destination other than those named herein	MIA P	72	40	15	Dy				
	MSY P	114	15	15	Dy				
	BRO P	120	15	15	Dy				
	CRP P	120	15	15	Dy				
	NLD P	123	15	15	Dy				
	LAX P	140	15	15	Dy				
Colonia, Cayman	IDL AO	204	142	30	Dy				
	IDL BO	204	142	30	Dy				
Compass, Bolivia	MIA P	116	63	15	M, F				
	MSY P	122	70	15	M, F				
	BRO P	126	72	15	M, F				
	CRP P	126	72	15	M, F				
	LAX P	129	75	15	M, F				
Copenhagen, Denmark	IDL S	112	85	15	Dy except Th				
	IDL AO	112	85	15	F				
	BRO AO	112	85	15	F				
	IDL S	112	85	15	T, Sa				
	LGA TR	100	75	124					
	HFD TR	100	75	124					
	IDL AF	121	91	15	Dy				
	BRO AF	110	80	15	Dy				
	IDL K	112	85	15	M, W, F, Sa				
	EWRTC	90	75	25					
	IDL BO	112	85	15	M, W, F, Sa				
Capitoline, Belgium Congo	IDL S	220	145	15	T, Sa				
	MIA P	30	70	15	F				
	MSY P	142	80	15	W				
	BRO P	142	80	15	W				
	CRP P	142	80	15	W				
	LAX P	140	100	15	W				
Caracas, Venezuela	IDL S	220	147	15	T, Sa				
Caracas, Venezuela	MIA P	41	21	15	Dy				
	MSY P	47	28	15	Dy				
	BRO P	50	31	15	Dy				
	CRP P	50	31	15	Dy				
	LAX P	60	31	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy				
Casaca, Colombia	MIA P	44	20	15	Dy				
	MSY P	44	20	15	Dy				
	BRO P	44	20	15	Dy				
	CRP P	44	20	15	Dy				
	LAX P	44	20	15	Dy	</			

## International Cargo Taxes — Continued

RATES (See Note)										RATES (See Note)										RATES (See Note)									
Destination	Aircraft	1st	2nd	3rd	4th	5th	6th	7th	8th	Destination	Aircraft	1st	2nd	3rd	4th	5th	6th	7th	8th	Destination	Aircraft	1st	2nd	3rd	4th	5th	6th	7th	8th
Guatemala City	MIA	30	10	15	Dly					Hong Kong, Br.	LGA	P	2.80	2.10	1.5	Na.T.W.				Istanbul, Const'd.	IDL	BO	1.40	1.10	1.5	Na.M.T.T.F.			
Guatemala	MIA	30	10	15	Dly					Can. Col.	SEC	P	2.80	2.10	1.5	Na.T.W.					EWK	TR	1.00	1.10	1.5	Na.M.T.T.F.			
"	MIA	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.					MIA	TR	1.00	1.10	1.5	Na.M.T.T.F.			
"	SEC	P	2.80	2.10	1.5	Na.T.W.				"	SEC	P	2.80	2.10	1.5	Na.T.W.					MEY	TR	1.00	1.10	1.5	Na.M.T.T.F.			
"	CRP	P	2.80	2.10	1.5	Na.T.W.				"	LAX	P	2.80	2.10	1.5	Na.T.W.					BOU	TR	1.00	1.10	1.5	Na.M.T.T.F.			
"	LAX	P	2.80	2.10	1.5	Na.T.W.				"	SEC	P	2.80	2.10	1.5	Na.T.W.					BRD	TR	1.00	1.10	1.5	Na.M.T.T.F.			
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.					CRP	TR	1.00	1.10	1.5	Na.M.T.T.F.			
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.					LAX	TR	1.00	1.10	1.5	Na.M.T.T.F.			
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.					IDL AO*	1.97	1.40	1.5	Na.M.T.T.F.				
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.80	2.10	1.5	Na.T.W.													
"	MEX 74	30	10	15	Dly					"	SEC	P	2.8																



## INTERNATIONAL CARGO TABLES — Continued

RATES (See Note)							RATES (See Note)							RATES (See Note)						
Destination	Airline	1st	2nd	3rd	4th	Depart	Destination	Airline	1st	2nd	3rd	4th	Depart	Destination	Airline	1st	2nd	3rd	4th	Depart
		20	21	22	23				20	21	22	23				20	21	22	23	
Mexico City	EWRTU	10	20			Frequently	Mexico, France	IDL AO*	1.15	67	15	Dly		Chihuahua, Con'td.	YIP A*	2.35	1.70	15	Dly	
Mexico City	MIA	10	20			Dly	"	IDL AP	1.15	67	15	M		"	YIP A*	2.35	1.70	15	Dly	
Mexico City	BOU	10	20			Dly	"	IDL AP	1.15	67	15	M		"	YIP A*	2.35	1.70	15	Dly	
Mexico City	CRP	10	20			Dly	Munich, Germany	LGA P	1.20	60	15	Dly		"	YIP A*	2.35	1.70	15	Dly	
Mexico City	LAX	10	20			Dly	"	IDL AO*	1.20	60	15	Dly		"	YIP A*	2.35	1.70	15	Dly	
Mexico City	IDL BO	1.27	1.71	10		Su, M, T, Th, F	"	IDL AO*	1.20	60	15	Dly		"	YIP A*	2.35	1.70	15	Dly	
Mexico City	IDL E	1.27	1.71	10		Su, T, F	"	IDL AO*	1.20	60	15	T, F		"	YIP A*	2.35	1.70	15	Dly	
Mexico City	LGA	1.27	1.71	10		Su, Th	Nairobi, Kenya	IDL AO*	1.07	1.44	20	Dly		Oran, Algeria	IDL AO*	1.40	1.08	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	M, Th, F		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL AP	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL E	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	CRP	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	LAX	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	Dly except Th		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	MIA	1.27	1.71	10		Dly	"	IDL BO	1.00	1.40	15	T, Sa		"	IDL AP	1.00	1.00	21	Su, Th	
Mexico City	BOU	1																		



## INTERNATIONAL CARGO TABLES—Continued

[illegible]

## INTERNATIONAL CARGO TABLE—Continued

Destination	Airport + Airline	RATES (See Note)					Day	Destination	Airport + Airline	RATES (See Note)					Day	Destination	Airport + Airline	RATES (See Note)					Day
		1	2	3	4	5				1	2	3	4	5				1	2	3	4	5	
		1	2	3	4	5				1	2	3	4	5				1	2	3	4	5	
Singapore, Conf'd.	VIP U*	0.36	1.70	15	15	15		Vladivostok, Conf'd.	MYT TA	40	22				Dly except Su	Yuen, India	MIA P*	1.10	20	15	F		
"	WKE	0.30	1.70	15	15	15		"	MEX T*	30	30				Yuen F	"	MYT P*	1.10	20	15	F		
"	SEA	0.30	1.70	15	15	15		"	BOU P*	1.70	30	15	15	15	"	"	BOU P*	1.10	20	15	F		
"	SWR U*	0.30	1.70	15	15	15		"	MYT BK	1.70	30	15	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA U*	0.30	1.70	15	15	15		"	SWR TC	1.70	30	15	15	15	"	"	BOU P*	1.10	20	15	F		
Singapore, Conf'd.	WKE TA	40	22					Vladivostok, Conf'd.	IDL AO*	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	IDL BO*	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SWR TA	40	22					"	IDL K	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	IDL K	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
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"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
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"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
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"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
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"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
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"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
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"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
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"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22					"	SWR TC	1.70	1.20	30	15	15	"	"	BOU P*	1.10	20	15	F		
"	SEA TA	40	22		</																		

International Air Cargo Rates are a standard feature in AIR TRANSPORTATION. This is another typical service for air shippers who require up-to-the-minute data. The rates appearing in this issue were current at presstime.

# Compare!

## AIR TRANSPORTATION QUARTERLY CIRCULATION REPORT

(Period of January-March, 1950)

JANUARY	8,095 copies
FEBRUARY	8,100 copies
MARCH	8,075 copies
AVERAGE FOR 3 MONTHS	8,090 copies

### CIRCULATION BREAKDOWN

(Based on March, 1950 Issue)

Shippers (manufacturers, freight forwarders, traffic managers, exporters, importers, buyers, wholesalers, retailers, etc.)	6,185
Airlines (various departments, executives, key personnel, etc.)	516
Aircraft and equipment manufacturers, sales and service	66
Military	88
Banking organizations	7
Insurance organizations	31
Trade organizations, chambers of commerce, etc.	64
U. S. federal, state, and municipal departments	329
Foreign governments	48
Colleges, universities, students, etc.	158
Public and business libraries	58
Advertising agencies, public relations firms, exchanges	102
Newspapers, news agencies, magazines, etc.	17
Miscellaneous subscriptions	81
Office files, samples, over-counter sales	325
TOTAL	8,075

I hereby make oath and say that the above statement is true, and that Printer's Invoice and Post Office Statement are available.

... Richard Mullin, Managing Editor

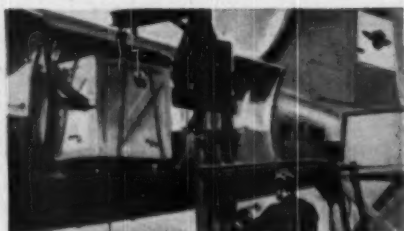
Subscribed and sworn to me this 23rd day of March, 1950.

... Gertrude E. Smizer, Notary Public

EFFECTIVE MARCH 29th-

# KLM OFFERS LOWEST AIR CARGO RATES IN HISTORY

Transatlantic  
Rates Reduced  
2 WAYS



**1. LOWER CHARGES 2. LOWER MINIMUM WEIGHT REQUIREMENTS**

KLM makes possible the greatest savings ever offered on air cargo to ALL EUROPE, SOUTH AFRICA, THE MIDDLE AND FAR EAST!

These new KLM rates apply to NYLONS, DRESSES, FURS, PENS-PENCILS, PHARMACEUTICALS and more than 50 other specific commodities.

Daily Flights from New York . . .  
Same Fast Dependable KLM Service



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1919 - 1930

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## PARTIAL LISTING OF NEW KLM AIR CARGO RATES

### ITEM #1330

#### NYLON HOSIERY

Destination	Weight	Rate per lb.
Frankfurt	500 lbs.	500
Frankfurt	1000 lbs.	500
Frankfurt	2000 lbs.	500
Frankfurt	3000 lbs.	500
Frankfurt	4000 lbs.	500
Frankfurt	5000 lbs.	500
Frankfurt	6000 lbs.	500
Frankfurt	7000 lbs.	500
Frankfurt	8000 lbs.	500
Frankfurt	9000 lbs.	500

### ITEM #1977

#### NYLON YARN

Destination	Weight	Rate per lb.
Frankfurt	500 lbs.	500
Frankfurt	1000 lbs.	500
Frankfurt	2000 lbs.	500
Frankfurt	3000 lbs.	500
Frankfurt	4000 lbs.	500
Frankfurt	5000 lbs.	500
Frankfurt	6000 lbs.	500
Frankfurt	7000 lbs.	500
Frankfurt	8000 lbs.	500
Frankfurt	9000 lbs.	500

### ITEM #1636

#### PENS-PENCILS

Destination	Weight	Rate per lb.
Frankfurt	500 lbs.	500
Frankfurt	1000 lbs.	500
Frankfurt	2000 lbs.	500
Frankfurt	3000 lbs.	500
Frankfurt	4000 lbs.	500
Frankfurt	5000 lbs.	500
Frankfurt	6000 lbs.	500
Frankfurt	7000 lbs.	500
Frankfurt	8000 lbs.	500
Frankfurt	9000 lbs.	500

### ITEM #1700

#### RADIOS AND RADIO PARTS

Destination	Weight	Rate per lb.
Frankfurt	500 lbs.	500
Frankfurt	1000 lbs.	500
Frankfurt	2000 lbs.	500
Frankfurt	3000 lbs.	500
Frankfurt	4000 lbs.	500
Frankfurt	5000 lbs.	500
Frankfurt	6000 lbs.	500
Frankfurt	7000 lbs.	500
Frankfurt	8000 lbs.	500
Frankfurt	9000 lbs.	500

### ITEM #1117

#### CHEMICALS AND PHARMACEUTICALS

Rates are particularly advantageous to Athens, Brussels, Cairo, Damascus, Dusseldorf, Frankfurt, Geneva, Hamburg, Istanbul, Lyons, Madrid, Munich, Paris, Rome, Valencia and Zurich. For example:

Destination	Weight	Rate per lb.
Frankfurt	500 lbs.	500
Frankfurt	1000 lbs.	500
Frankfurt	2000 lbs.	500
Frankfurt	3000 lbs.	500
Frankfurt	4000 lbs.	500
Frankfurt	5000 lbs.	500
Frankfurt	6000 lbs.	500
Frankfurt	7000 lbs.	500
Frankfurt	8000 lbs.	500
Frankfurt	9000 lbs.	500

### ITEM #1210

#### FURS-HIDES AND SKINS

Destination	Weight	Rate per lb.
Frankfurt	500 lbs.	500
Frankfurt	1000 lbs.	500
Frankfurt	2000 lbs.	500
Frankfurt	3000 lbs.	500
Frankfurt	4000 lbs.	500
Frankfurt	5000 lbs.	500
Frankfurt	6000 lbs.	500
Frankfurt	7000 lbs.	500
Frankfurt	8000 lbs.	500
Frankfurt	9000 lbs.	500

RATES TO OTHER DESTINATIONS  
AND ON OVER 50 OTHER COMMODITIES  
QUOTED ON REQUEST